

Bright and Persistent Green Emitting $\text{MgGa}_2\text{O}_4:\text{Mn}^{2+}$ for Phosphor Converted White Light Emitting Diodes

Reshmi T. Parayil^{1,2}, Santosh K. Gupta^{1,2*}, Malini Abraham^{3,4}, Deepak Tyagi⁵ Subrata Das^{3,4}, Mohit Tyagi^{2,6} N.S. Rawat,^{2,7} Manoj Mohapatra^{1,2}

¹Radiochemistry Division, Bhabha Atomic Research Centre, Trombay, Mumbai-400085, India

²Homi Bhabha National Institute, Anushaktinagar, Mumbai – 400094, India

³Materials Science and Technology Division, CSIR-National Institute for Interdisciplinary Science and Technology, Thiruvananthapuram, Kerala 695019

⁴Academy of Scientific and Innovative Research (AcSIR), Ghaziabad-201002, India

⁵Chemistry Division, Bhabha Atomic Research Centre, Trombay, Mumbai-400085, India

⁶Technical Physics Division, Bhabha Atomic Research Centre, Trombay, Mumbai-400085, India

⁷Radiation Physics and Advisory Division, Bhabha Atomic Research Centre, Mumbai-400085.

*To whom correspondence should be addressed. Electronic mail: *santoshg@barc.gov.in/
santufnd@gmail.com (SKG)

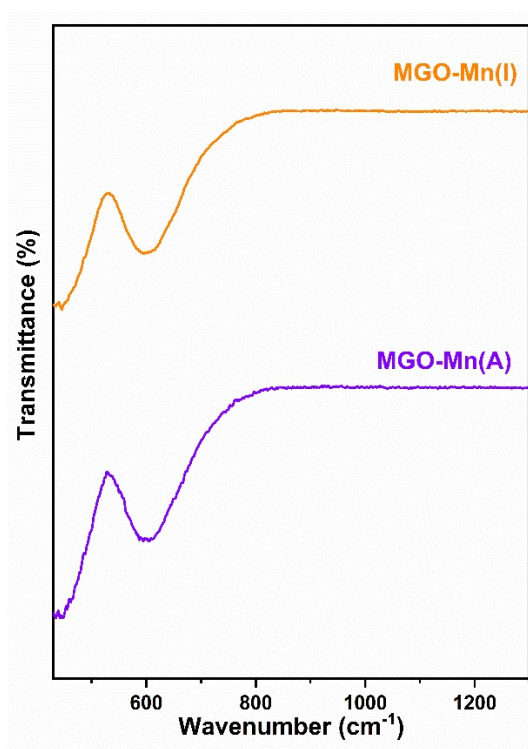


Figure S1: FTIR spectra of MGO-Mn(A) and MGO-Mn(I)

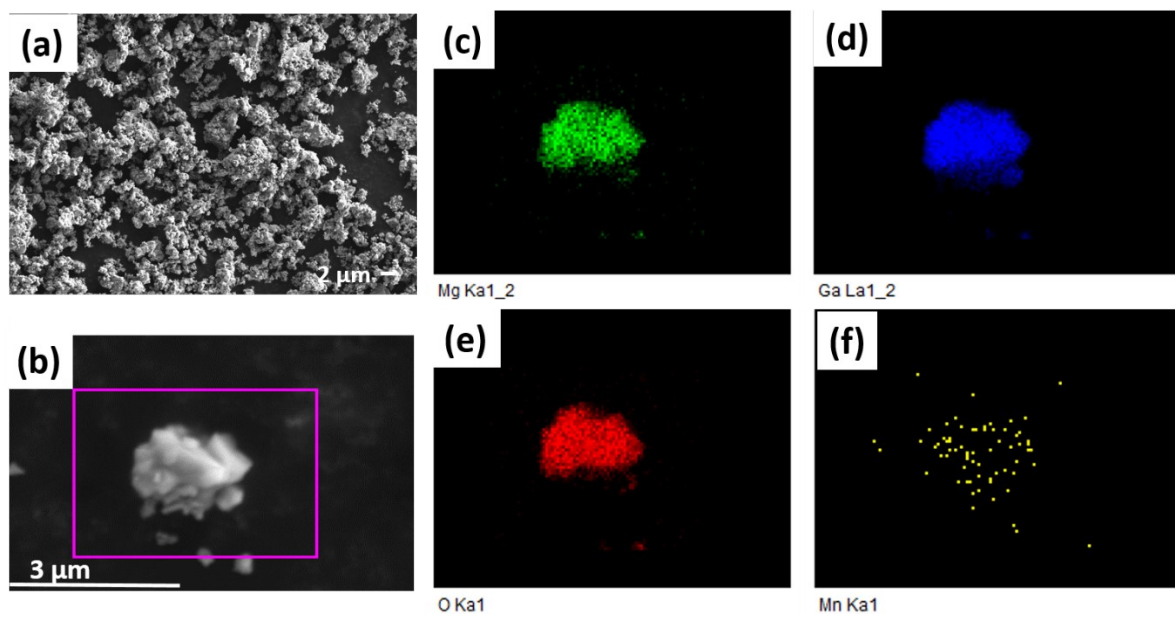


Figure S2: (a) FESEM image (b-f) EDS mapping of MGO-Mn(R)

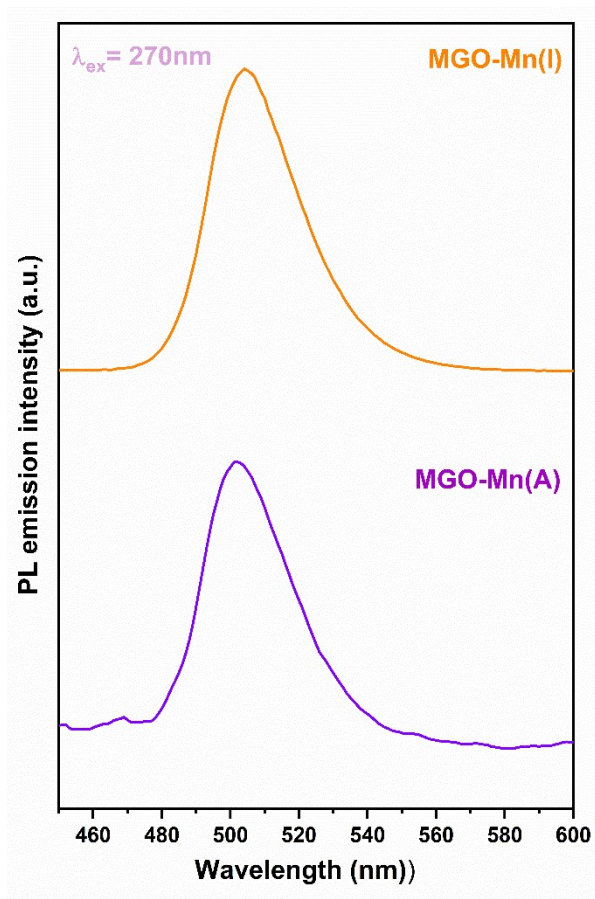


Figure S3: Emission spectra of MGO-Mn(A) and MGO-Mn(I)

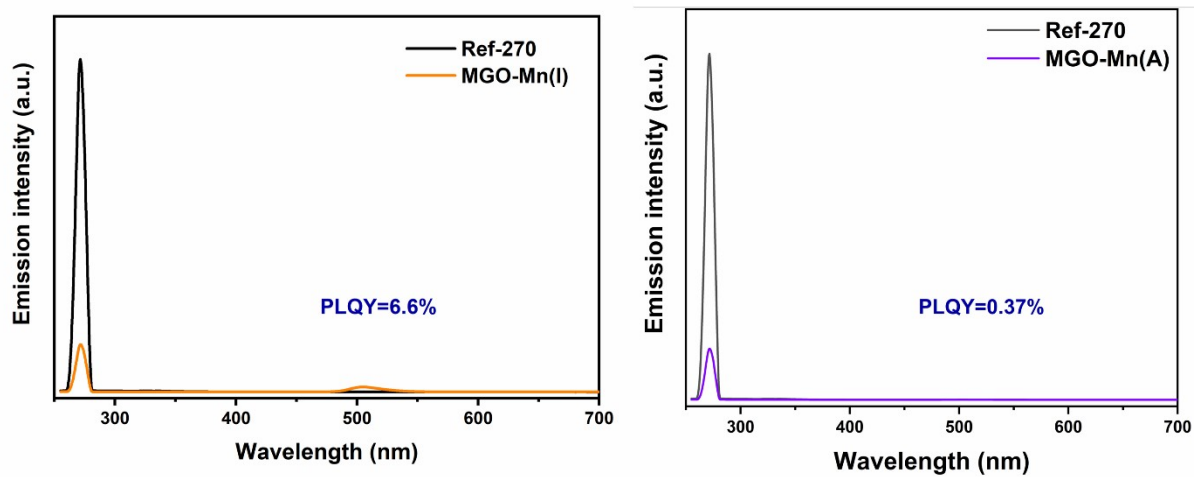


Figure S4: Spectra for quantum yield of MGO-Mn(A) and MGO-Mn(I)

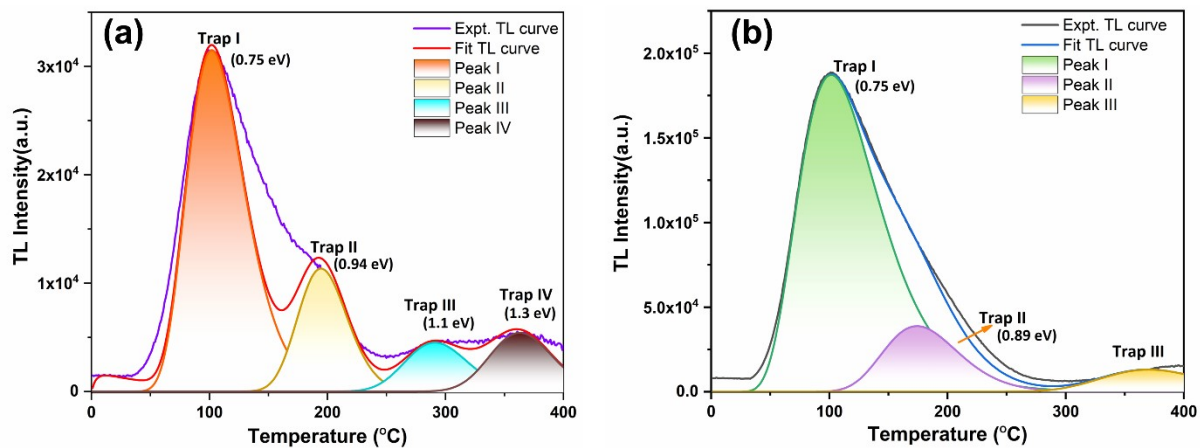


Figure S5: Thermoluminescence spectra of (a) MGO-Mn(A) and (b) MGO-Mn(I)